Please provide the following information, and submit to the NOAA DM Plan Repository.

Reference to Master DM Plan (if applicable)

As stated in Section IV, Requirement 1.3, DM Plans may be hierarchical. If this DM Plan inherits provisions from a higher-level DM Plan already submitted to the Repository, then this more-specific Plan only needs to provide information that differs from what was provided in the Master DM Plan.

URL of higher-level DM Plan (if any) as submitted to DM Plan Repository:

1. General Description of Data to be Managed

1.1. Name of the Data, data collection Project, or data-producing Program:
Delaware / New Jersey / Pennsylvania 2014 ESI BIRDS Polygons and NESTS Points

1.2. Summary description of the data:
These data sets contains sensitive biological resource data for alcids, diving birds, gulls, terns, passerines, pelagic birds, raptors, shorebirds, wading birds, and waterfowl in Delaware Bay and nearby coastal areas of Delaware, New Jersey, and Pennsylvania. Vector polygons in the BIRDS data set represent bird nesting, migratory staging, and wintering sites. Vector points in the NESTS data set represent raptor and wading bird nests. Species specific abundance, seasonality, status, life history, and source information are stored in relational data tables (described below) designed to be used in conjunction with this spatial data layer. This data set comprises a portion of the ESI data for Delaware/New Jersey/Pennsylvania. ESI data characterize the marine and coastal environments and wildlife by their sensitivity to spilled oil. The ESI data include information for three main components: shoreline habitats, sensitive biological resources, and human-use resources.

1.3. Is this a one-time data collection, or an ongoing series of measurements?
One-time data collection

1.4. Actual or planned temporal coverage of the data:
2013 to 2014

1.5. Actual or planned geographic coverage of the data:
W: -75.75, E: -74.0377, N: 40.2501, S: 38.375
This reflects the extent of all land and water features included in the overall Delaware Bay (Delaware, New Jersey, Pennsylvania) 2014 ESI study region. The bounding box for this particular feature class may vary depending on occurrences identified and mapped.

1.6. Type(s) of data:
(e.g., digital numeric data, imagery, photographs, video, audio, database, tabular data, etc.)
Map (digital)

1.7. Data collection method(s):

(e.g., satellite, airplane, unmanned aerial system, radar, weather station, moored buoy, research vessel, autonomous underwater vehicle, animal tagging, manual surveys, enforcement activities, numerical model, etc.)

1.8. If data are from a NOAA Observing System of Record, indicate name of system:

1.8.1. If data are from another observing system, please specify:

2. Point of Contact for this Data Management Plan (author or maintainer)

2.1. Name:
ESI Program Manager

2.2. Title:
Metadata Contact

2.3. Affiliation or facility:

2.4. E-mail address:
orr.esi@noaa.gov

2.5. Phone number:

3. Responsible Party for Data Management
Program Managers, or their designee, shall be responsible for assuring the proper management of the data produced by their Program. Please indicate the responsible party below.

3.1. Name:
ESI Program Manager

3.2. Title:
Data Steward

4. Resources
Programs must identify resources within their own budget for managing the data they produce.

4.1. Have resources for management of these data been identified?

4.2. Approximate percentage of the budget for these data devoted to data management (specify percentage or "unknown"):

5. Data Lineage and Quality
NOAA has issued Information Quality Guidelines for ensuring and maximizing the quality,

objectivity, utility, and integrity of information which it disseminates.

5.1. Processing workflow of the data from collection or acquisition to making it publicly accessible

(describe or provide URL of description):

Lineage Statement:

For each species, the mapping extent was dependent upon information availability and location of mapped coastal habitats and shorelines. Three main sources of data were used to depict bird distribution and seasonality for this data layer: 1) personal interviews with resource experts from: Delaware Department of Natural Resources and Environmental Control (DNREC), NJ Department of Environmental Protection Division of Fish and Wildlife (NJDEP F&W), NJDEP F&W Endangered and Nongame Species Program (ENSP), U.S. Fish and Wildlife Service (USFWS), U.S. Geological Survey (USGS), and Pennsylvania Game Commission (PGC); 2) numerous published and unpublished reports; and 3) digital/tabular data sets provided by: DNREC, NJDEP F&W, NJDEP ENSP, USFWS, USGS, and PGC.

Process Steps:

- 2014-03-01 00:00:00 - DE, NJ, and PA waterfowl: Waterfowl surveys were conducted in 11 zones in DE, 29 zones in NJ, and 2 zones in PA from Oct.-Jan., ranging from 1980-2012 (dependent on state). In all three states, surveys provided simple counts of all species within the survey zones. A "wetlands and inland water bodies" habitat class was created by selecting ESI 10A, -B, -C, and -D within the survey zones and buffering them by 10 m before merging them with all adjacent inland water bodies. The resulting polygons were then edited to eliminate any gaps or isolated polygons less than 10,000 m2. The second habitat class was defined as " large open water bodies". This habitat type includes the inland bays and sounds of DE and NJ as well as portions of the Delaware River. Concentrations were calculated as the maximum value of summed points within a month across all years surveyed and generalized to categorical bins of 10s, 100s, 1,000s, etc. Survey zones were aggregated if they were geographically adjacent and had similar maximum counts and species assemblages.
- 2014-03-01 00:00:00 - Delaware Bay and Atlantic Ocean seabirds: Two data sets were used: 1) USFWS Atlantic Coast Wintering Sea Duck Survey (ACWSDS) and the USGS Atlantic Offshore Seabird Dataset Catalog (AOSDC). Based on expert advice, data was first grouped into nearshore (1 nautical mile from shore) and offshore (1-12 nm) polygons. Data was further subdivided between DE and NJ coasts, and between the Delaware Bay and open ocean waters. Data from the ACWSDS were used for the majority of the ESI study area, as the data had better coverage, replication, and consistency. The AOSDC data were only incorporated along the Delaware River between the Delaware Memorial Bridge and Nantuxent Point, NJ/ Bombay Hook, DE. The majority of surveys for the ACWSDS were flown from Oct.-Mar. along predetermined latitudinal transects spaced 5 nm apart. Concentrations of seabird species for a given region were calculated as the maximum value of summed points within a survey period across all years surveyed.

- 2014-03-01 00:00:00 - Delaware Element Occurrence Data: Rare and endangered species of birds were mapped in part using element occurrence data provided by DNREC. Polygons with diameters greater than 100 m were mapped as is and all other polygons were mapped after applying a polygonal buffer and a randomized geographic shift.
- 2014-03-01 00:00:00 - Delaware Shorebirds: DNREC provided polygonal data representing red knot concentration areas during spring migration, beach nesting bird locations, and impoundments. Please note that names were obscured for all DE species that are listed DE State endangered and/or federally threatened to generic names such as "endangered shorebird". DNREC also provided shorebird flock count data along Delaware Bay beaches. Data from the last 10 years (2003-2013) was summarized for inclusion in the atlas and was generalized to categorical bins of 10s, 100s, 1,000s, etc., representing the max counts for each species within each site over the survey period.
- 2014-03-01 00:00:00 - Delaware Marshbirds and Passerines: DNREC provided Delaware Breeding Bird Atlas 2008-2012 data for secretive marsh birds and marsh-breeding passerines. In each BBA quad in which a species was indicated as "present" , that species was mapped to all appropriate ESI habitats.
- 2014-03-01 00:00:00 - Delaware NWR birds: Bombay Hook and Prime Hook NWRs provided Integrated Waterbird Management and Monitoring (IWMM) survey data, Saltmarsh Habitat and Avian Research Program (SHARP) survey data, and Saltmarsh Integrity (SMI) survey data. The IWMM data was limited to discrete survey areas within each refuge. Data from 2010-2013 was summarized for inclusion in the atlas. Concentrations were generalized to categorical bins of 10s, 100s, 1,000s, etc., representing high counts for each species within each IWMM site over the survey period. SHARP and SMI surveys covered refuge habitat more broadly, so they were used to create species lists that covered the remaining extent of these refuges.
- 2014-03-01 00:00:00 - New Jersey ENSP Shorebirds: Polygonal buffers were provided by NJ ENSP for spring shorebird concentration areas and red knot "status assessments". NJ ENSP provided polygonal data on Colonial Waterbird nesting areas. Colonial waterbirds utilize many habitats for breeding, including salt marshes and salt marsh islands, barrier islands and beaches, dredge spoil islands, and natural sand shoals, particularly behind the barrier islands and in the major bay systems in coastal NJ.
- 2014-03-01 00:00:00 - New Jersey ENSP Raptors: A buffer, as specified by the data provider, was applied to all raptor nests that were delivered to RPI as points. Raptor nests that were delivered to RPI as polygons (buffer was applied by NJ ENSP around nest site prior to data delivery) were portrayed "as is".
- 2014-03-01 00:00:00 - New Jersey NWR birds: Supawna Meadows NWR provided marsh bird survey and saltmarsh sparrow survey data. Species, including: shorebirds, wading birds, raptors, gulls, terns, and other passerines were mapped to the entirety of the Supawna Meadows NWR and adjacent marshes. Pea Patch Island (DE) nesting wading birds survey data were also provided by Supawna

Meadows NWR. Data from Edwin B. Forsythe NWR were compiled with data received from ENSP to capture the full suite and range of species mapped within the reserve boundaries.
- 2014-03-01 00:00:00 - Pennsylvania BBA birds: PGC provided data from the 2nd Pennsylvania Breeding Bird Atlas (2ndPBBA). The 2ndPBBA atlas contained data on all breeding birds and observance data of non-breeding birds. Breeding bird data records categorized as "Confirmed" or "Probable" were mapped in the appropriate habitat for each species within the 2nd BBA quad where each species was present. These records were listed with a nesting season in the ESI seasonality table. Observance data of non-nesters (categorized in the dataset as "Observed") were mapped in the ESI atlas when coordinates were included with the record. Nesting seasons were not included in the ESI seasonality table for these records.
- 2014-03-01 00:00:00 - NESTS Points: Two main sources of data were used to depict nests for the NESTS Points data layer: 1) personal interviews with resource experts from: Delaware Department of Natural Resources and Environmental Control (DNREC), U.S. Fish and Wildlife Service (USFWS) Bombay Hook National Wildlife Refuge (NWR), and Pennsylvania Game Commission (PGC); and 2) digital/tabular data sets provided by DNREC and PGC. Peregrine falcon (PA state endangered) and bald eagle (PA state threatened) nest locations were provided by PGC. Osprey nest locations were provided by DNREC. Nest locations for bald eagles and black-crowned night-heron (DE SE) were provided by Bombay Hook National Wildlife Refuge (NWR). Nest points were mapped "as is" without further geoprocessing. The above digital and/or hardcopy sources were compiled by the project biologist to create the NESTS Points data layer.
- 2014-03-01 00:00:00 - Federally threatened (FT) and state listed endangered (SE) or threatened (ST) or rare (not listed) bird species for which common names were obscured in one or more states (DE and/or NJ), due to requests from data providers within those states, were renamed based on their federal or state listing status and ESI subelement: e.g., "endangered tern", "threatened shorebird", "rare passerine", etc. The above digital and/or hardcopy sources were compiled by the project biologist to create the BIRDS data layer. Depending on the type of source data, three general approaches are used for compiling the data layer: 1) information gathered during initial interviews and from hardcopy sources are compiled onto U.S. Geological Survey 1:45,000 topographic quadrangles and digitized; 2) hardcopy maps are digitized at their source scale; 3) digital data layers are evaluated and used "as is" or integrated with the hardcopy data sources. See the Lineage section for additional information on the type of source data for this data layer. The ESI, biology, and human-use data are compiled into the standard ESI digital data format. A second set of interviews with participating resource experts are conducted to review the compiled data. If necessary, edits to the BIRDS Polygons and NESTS Points data layers are made based on the recommendations of the resource experts, and final hardcopy maps and digital data are created.

5.1.1. If data at different stages of the workflow, or products derived from these

data, are subject to a separate data management plan, provide reference to other plan:

5.2. Quality control procedures employed (describe or provide URL of description):

6. Data Documentation

The EDMC Data Documentation Procedural Directive requires that NOAA data be well documented, specifies the use of ISO 19115 and related standards for documentation of new data, and provides links to resources and tools for metadata creation and validation.

6.1. Does metadata comply with EDMC Data Documentation directive?

No

6.1.1. If metadata are non-existent or non-compliant, please explain:

Missing/invalid information:
- 1.7. Data collection method(s)
- 4.1. Have resources for management of these data been identified?
- 4.2. Approximate percentage of the budget for these data devoted to data management
- 5.2. Quality control procedures employed
- 7.1. Do these data comply with the Data Access directive?
- 7.1.1. If data are not available or has limitations, has a Waiver been filed?
- 7.1.2. If there are limitations to data access, describe how data are protected
- 7.4. Approximate delay between data collection and dissemination
- 8.1. Actual or planned long-term data archive location
- 8.3. Approximate delay between data collection and submission to an archive facility
- 8.4. How will the data be protected from accidental or malicious modification or deletion prior to receipt by the archive?

6.2. Name of organization or facility providing metadata hosting:

NMFS Office of Science and Technology

6.2.1. If service is needed for metadata hosting, please indicate:

6.3. URL of metadata folder or data catalog, if known:

https://www.fisheries.noaa.gov/inport/item/55217

6.4. Process for producing and maintaining metadata

(describe or provide URL of description):

Metadata produced and maintained in accordance with the NOAA Data Documentation Procedural Directive: https://nosc.noaa.gov/EDMC/DAARWG/docs/EDMC_PD-Data_Documentation_v1.pdf

7. Data Access

NAO 212-15 states that access to environmental data may only be restricted when distribution is explicitly limited by law, regulation, policy (such as those applicable to personally identifiable information or protected critical infrastructure information or proprietary trade information) or by security requirements. The EDMC Data Access Procedural Directive contains specific guidance, recommends the use of open-standard, interoperable, non-proprietary web services, provides information about resources and tools to enable data access, and includes a Waiver to be submitted to justify any approach other than full, unrestricted public access.

7.1. Do these data comply with the Data Access directive?

7.1.1. If the data are not to be made available to the public at all, or with limitations, has a Waiver (Appendix A of Data Access directive) been filed?

7.1.2. If there are limitations to public data access, describe how data are protected from unauthorized access or disclosure:

7.2. Name of organization of facility providing data access:
Office of Response and Restoration (ORR)

7.2.1. If data hosting service is needed, please indicate:

7.2.2. URL of data access service, if known:
https://response.restoration.noaa.gov/esi_download

7.3. Data access methods or services offered:
Data can be accessed by downloading the zipped ArcGIS geodatabase from the Download URL (see Distribution Information). Questions can be directed to the ESI Program Manager (Point Of Contact).

7.4. Approximate delay between data collection and dissemination:

7.4.1. If delay is longer than latency of automated processing, indicate under what authority data access is delayed:

8. Data Preservation and Protection

The NOAA Procedure for Scientific Records Appraisal and Archive Approval describes how to identify, appraise and decide what scientific records are to be preserved in a NOAA archive.

8.1. Actual or planned long-term data archive location:
(Specify NCEI-MD, NCEI-CO, NCEI-NC, NCEI-MS, World Data Center (WDC) facility, Other, To Be Determined, Unable to Archive, or No Archiving Intended)

8.1.1. If World Data Center or Other, specify:

8.1.2. If To Be Determined, Unable to Archive or No Archiving Intended, explain:

8.2. Data storage facility prior to being sent to an archive facility (if any):
Office of Response and Restoration - Seattle, WA

8.3. Approximate delay between data collection and submission to an archive facility:

8.4. How will the data be protected from accidental or malicious modification or deletion prior to receipt by the archive?
Discuss data back-up, disaster recovery/contingency planning, and off-site data storage relevant to the data collection

9. Additional Line Office or Staff Office Questions
Line and Staff Offices may extend this template by inserting additional questions in this section.